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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,119	10/09/2003	Yoshinori Yoneda	4710-0101P	8073
2292	7590	08/23/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			MOORE, MARGARET G	
			ART UNIT	PAPER NUMBER
			1712	
DATE MAILED: 08/23/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/681,119

Applicant(s)

YONEDA ET AL.

Examiner

Margaret G. Moore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 to 10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 to 7 is/are rejected.
- 7) ☒ Claim(s) 8 to 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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1. Claim 7 is objected to because of the following informalities: The 1,2,3,4 for pentane tetracarboxylic dianhydride and the 1,2,3,4 for the cyclohexane tetracarboxylic dianhydride should be 1,2,4,5. See page 10. Appropriate correction is required.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 to 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishikawa et al.

This rejection is based on the rationale detailed in the previous office action. In an effort to overcome this rejection applicants have inserted the requirement that X be aliphatic, alicyclic or aromatic, with the aromatic groups not being present in an amount that causes discoloration to the polyimidesiloxane resin. Please note that this claim limitation is different from that argued by applicants in their remarks, which states that the tetravalent organic group is derived from aliphatic or alicyclic tetracarboxylic anhydrides, but that a small amount of aromatic tetracarboxylic anhydride may be present such that the resulting polyimide is colorless. For instance, the actual claim language allows for all the residues to be from an aromatic anhydride as long as it does not cause discoloration. With this language in mind, the Examiner reviewed the specification for an indication of what amount of aromatic anhydride would provide such discoloration. No specific amount, or indication, was provided. In fact, it appears from the specification and even claim 7 that the entire X group can be derived from aromatic dianhydrides. See for instance page 10, which states that the dianhydrides taught may be used alone. This is comparable to the language in claim 7.

Applicants argue that one skilled in the art would know that aromatic tetracarboxylic acids generally have color; however, they have provided nothing to support this. As noted supra, from the specification there does not appear to be a limitation on the aromatic anhydrides. In addition, the Examiner cites Yamaguchi (column 5, line 29;

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column 7, line 58; column 8, line 31) and Hayase et al. (Examples 2 and 4) which shows polyimides prepared from aromatic dicarboxylic acids that are colorless and transparent. In effect, there is nothing to support applicants' position that the polyimides in Ishikawa et al. will not be colorless and transparent. Applicants' claims do not specifically limit the aromatic groups such that they clearly exclude those found in Ishikawa et al. As such this rejection is maintained.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al.

Ishikawa et al. do not specifically produce a polyimide from MBHA and ETDA, but column 8 clearly shows that ETDA can be used in the alternative with BPDA, which is specifically used with MBHA. In this manner one having ordinary skill in the art would have found the preparation of a polyimide with ETDA rather than BPDA, as shown in example 8, to have been obvious.

6. In the event that applicants' amendment does distinguish the instant claims from the prior art (though it is the Examiner's position that applicant have not fully met this burden) the following new ground of rejection is being made.

7. Claims 1 to 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayase et al.

Hayase et al. teach polyimides. Note that the diamine components are from a combination of aromatic compounds having hydroxyl groups (the b unit in formula (I) on

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column 3) and polysiloxane compounds (the d unit in formula (II) on column 3). The top of column 8 teaches amounts of (I) and (II) that correspond to instant claim 2.

Column 5, lines 13 to 28, teach various dianhydrides, including benzophenone and butanetetracarboxylic acid (both within the breadth of claim 7). Column 5, lines 61, teaches the particular diamine of formula (3). Particular attention is drawn to Example 4. This prepares a colorless polyimide made from benzophenone (again, meeting instant claim 7) and a polydiorganosiloxane diamine. This differs from the instant claims only in that it uses a different hydroxyl containing aromatic diamine from that of formula (3) in claim 1. As shown on column 5, however, the diamine of claim 1 can be used in the alternative with the diamine specifically shown. These diamines are disclosed as being used in the alternative, indicating their functional equivalence. It is prima facie obvious to substitute equivalent for one another, based on the expectation of obtaining equivalent results. In this manner the instant claims are rendered obvious. The skilled artisan would not have expected this substitution to change the fact that the polyimide in Example 4 is colorless since, as argued by applicants, it is the aromatic group that results in color absorption.

On the other hand, note that patentees teach that butanetetracarboxylic acid can be used in the alternative with benzophenone tetracarboxylic acid. This renders obvious the selection of a aliphatic dianhydride.

8. Claims 8 to 10 are objected to as being based on a rejected base claim, but drawn to allowable subject matter. The prior art fails to teach or suggest such a specific polyimide.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

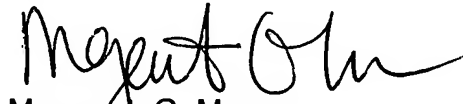
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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret G. Moore whose telephone number is 571-272-1090. The examiner can normally be reached on Monday to Wednesday and Friday, 10am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Margaret G. Moore  
Primary Examiner  
Art Unit 1712

mgm  
8/19/05